OMG! MY BOSS JUST FRIENDED ME: HOW EVALUATIONS OF COLLEAGUES' DISCLOSURE, GENDER, AND RANK SHAPE PERSONAL/ PROFESSIONAL BOUNDARY BLURRING ONLINE

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We propose and test a relational boundary-blurring framework, examining how employees' evaluations of colleagues' characteristics drive their decisions to connect with colleagues as friends online. We use a multi-method approach across four studies to investigate how self-disclosure of personal information, gender, and rank shape warmth evaluations of colleagues and subsequent boundary blurring decisions on online social networks such as Facebook. Study 1, a large archival study using a nationally representative sample, finds that connecting as friends with colleagues online is prevalent. Study 2, examining employees across several industries, shows that people experience connecting as friends with colleagues online as boundary blurring. Two experimental studies (Studies 3 and 4) ascertain that employees are more likely to connect as friends online with colleagues who engage in more (vs. less) self-disclosure and are less likely to connect with bosses (vs. peers). Further, self-disclosure, gender, and rank interact, such that employees are more likely to connect with female bosses who disclose more, compared to those who disclose less, and compared to male bosses, regardless of selfdisclosure. Our work contributes to boundary management research by demonstrating that employees' decisions to blur the personal/professional boundary online crucially depends on whom they are blurring the boundary with.

We thank our editor, Katherine DeCelles, and three anonymous reviewers for their many insightful comments. Justin Berg deserves special thanks for his early contributions to these ideas. We thank Xiang Ao, Rachel Arnett, and Leslie John for their helpful ideas and feedback. We also thank participants in the Wharton IDEAS Lab and the Harvard Organizational Behavior Unit for their helpful feedback and suggestions. This research was supported by funding from the Wharton Center for Leadership and Change Management, the Wharton Behavioral Lab, the Harvard Business School Division of Research, and the Social Sciences and Humanities Research Council of Canada.

I felt hesitant about [accepting a Facebook friend request from my colleague], because they were my boss at the time, and I didn't want them to see so much of my personal life. It was nice to feel like they wanted to get to know me more, but, at the same time, it was my boss, who had power over my career.

-Male, 34 years old, digital operations manager

As the world becomes increasingly "wired," employees must make new decisions about how to navigate the boundary between their personal and professional lives. The most popular online social networks (OSNs), such as Facebook, Instagram, and Twitter, are being used both in personal and

professional domains (Leonardi & Vaast, 2017; Miller & Mundey, 2015; Ollier-Malaterre, Rothbard, & Berg, 2013; Utz, 2015; Wilson, Gosling, & Graham, 2012). Mixing or blurring personal and professional interactions at work can be complex even in offline relationships, as there are benefits, such as being able to reach out to colleagues for support, but also risks, such as having colleagues be privy to information about one's personal life (Dumas, Phillips, & Rothbard, 2013; Methot, Lepine, Podsakoff, & Christian, 2016; Pillemer & Rothbard, 2018). Several unique features of OSNs make these trade-offs even more complex. First, OSNs offer greater "social transparency," or visibility regarding what people communicate (Leonardi & Vaast, 2017; McFarland & Ployhart, 2015). Second, they enable "network articulation"—the public labeling of those in their social network as friends or contacts (Kane, 2015; Leonardi & Vaast, 2017). Third, OSN platforms encourage sharing personal information in less curated, tailored ways with broad, sometimes invisible audiences (Bazarova & Choi, 2014; Boyd, 2007). Last, disclosures on OSNs are persistent in time (Leonardi & Vaast, 2017). These features reduce employees' control over aspects of the personal/professional boundary, such as what personal information is shared, whom it is shared with, and how others perceive or share that information, amplifying the relational risks associated with boundary blurring.

To illustrate, blurring the boundary by connecting as a friend with a colleague online is more observable than in-person informal interactions such as dinner or drinks with that colleague. Likewise, explicitly connecting as a friend online reduces ambiguity about the existence of a blurred boundary with that colleague. Further, after connecting, an employee may not be aware of how much of their personal life the colleague is privy to because of the invisible audience and broad disclosures encouraged on OSNs. Finally, boundary blurring online may have more lasting social consequences than a single watercooler chat or interaction at a company party because online personal information leaves a more permanent trail.

Importantly, the online setting offers an opportunity to build theory on *relational* boundary blurring because it provides an extreme case (Eisenhardt, 1989) whereby employees must make visible, explicit, and lasting decisions about whom to invite into their personal lives on a relationship-by-relationship basis. Past boundary management research has primarily recognized distinctions between work and personal life domains, but has not examined

distinctions within each domain, overlooking the fact that people may vary in how they blur the boundary within each domain as well (Rothbard & Ollier-Malaterre, 2016). For example, people may blur the boundary differently depending on the type of relationships they have with individuals in the work domain—that is, an employee may blur the boundary differently with a boss than with a peer, or with a female versus a male colleague. Further, past research has not focused on such variations because it has largely examined how people navigate the personal/professional boundary by studying the characteristics, behaviors, and tactics a focal employee uses to blur or maintain "mental fences" between domains and transition between roles and identities (Ashforth, Kreiner, & Fugate, 2000; Kossek, Ruderman, Braddy, & Hannum, 2012; Kreiner, Hollensbe, & Sheep, 2009; Nippert-Eng, 1995; Ramarajan & Reid, 2013; Rothbard, Phillips, & Dumas, 2005) rather than taking into account the relational partner. We depart from past work to examine a novel aspect of boundary management: with whom we blur the boundary.

We develop a framework of relational boundary blurring by shifting the frame from the focal employee to the relational partner, examining how colleagues' characteristics shape employees' decisions to blur the boundary. We draw on person perception and social cognition research showing that people evaluate others' disclosure of personal information (Taylor & Oberlander, 1969) and status characteristics, such as gender (Cuddy, Fiske, & Glick, 2004; Eagly & Wood, 2012) and rank (Fiske, 1992; Wojciszke, Abele, & Baryla, 2009). We extend this work to relational boundary blurring by theorizing how these three characteristics, which convey warmth (Fiske, Cuddy, Glick, & Xu, 2002; Judd, James-Hawkins, Yzerbyt, & Kashima, 2005; Rosenberg, Nelson, & Vivekananthan, 1968), form key building blocks in evaluating which work colleagues employees choose to connect with as friends online. It is important to examine these evaluations in the OSN context because OSNs not only amplify the risks of boundary blurring for the focal employee but may also alter evaluations of the colleague. For instance, colleagues' disclosure of their personal life online has the potential to be perceived as insincere, strategic, or possibly "too much" for professional relationships. Thus, we examine how employees' judgments of colleagues' disclosure, gender, and rank independently and jointly shape relational decisions to blur the boundary by connecting as friends with colleagues online.

THEORETICAL BACKGROUND

"Boundary management" is the process by which individuals make decisions and act to separate (i.e., segment) or blur (i.e., integrate) the boundaries between multiple life domains (Allen, Cho, & Meier, 2014; Ashforth et al., 2000; Rothbard & Ollier-Malaterre, 2016; Rothbard et al., 2005). Segmentors delineate work and nonwork domains, for example, by keeping separate key chains for work and home (Nippert-Eng, 1996) and organizing "sacred time" in their calendars (Kreiner et al., 2009). Integrators blur boundaries by combining work and nonwork, for example, by displaying family pictures in the office (Byron & Laurence, 2015), having a common address book for work and nonwork contacts (Nippert-Eng, 1996), and socializing with colleagues (Dumas et al., 2013). Past work has analyzed key antecedents of boundary management such as individuals' preferences for integration versus segmentation and the control employees have over their boundaries, as well as key consequences such as performance and satisfaction (Capitano & Greenhaus, 2018; Kossek et al., 2012; Kreiner, 2006; Methot & LePine, 2016; Rothbard et al., 2005).

Past work has focused on navigating boundaries between role identities across domains, such as work and family (Ashforth et al., 2000; Nippert-Eng, 1995), treating these domains as undifferentiated within, such that one integrates or segments similarly with all counterparts at work or home (Rothbard & Ollier-Malaterre, 2016). However, this assumption does not capture the important heterogeneity and variety of relationship partners within a particular domain. Indeed, decisions to blur personal and professional roles can also occur interpersonally within domains, such as being friends with work colleagues. Thus, focusing on boundary blurring on a relationship-by-relationship basis is important—yet largely understudied.

The few boundary management papers that examine relationships highlight the perspective of the focal employee, but overlook characteristics of the relational partner. For example, Trefalt (2013) showed that focal employees' success in maintaining the work-home boundary depends on the perceived quality of relationships with colleagues. Other scholars have shown how individual characteristics of focal employees, such as their disclosure and status, affect whether blurring boundaries is beneficial or risky for work relationships (Dumas et al., 2013; Phillips, Rothbard, & Dumas, 2009; Pillemer & Rothbard, 2018). For example, blurring the

relational boundary by becoming friends with a colleague can introduce unique career risks, such as creating status distance, awkwardness, pressure, or ingratiation in relationships. However, one's assessment of these risks is also likely to depend on the characteristics of the relational partner. For example, one may feel less risk in blurring the boundary with a peer than with a boss.

Connection technologies and OSNs have taken boundary blurring online, making it more prevalent due to increased connectivity (Kossek & Lautsch, 2012; Mazmanian, Orlikowski, & Yates, 2013; Perlow, 2012) and more challenging due to emerging social norms to integrate (Ollier-Malaterre, Jacobs, & Rothbard, 2019). Research on OSN behaviors in the workplace has examined predictors such as a focal employees' preferences for segmentation versus integration (Ollier-Malaterre et al., 2013), attitudes toward privacy (Frampton & Child, 2013; Stutzman & Hartzog, 2012), and organizational identification (Fieseler, Meckel, & Ranzini, 2015). It has also examined consequences for workplace relationships (Ollier-Malaterre & Luneau-de Serre, 2018; Peluchette, Karl, & Fertig, 2013; Pillemer & Rothbard, 2018), organizational identification (Bartels, Van Vuuren, & Ouwerkerk, 2019), job satisfaction, and performance (Huang & Liu, 2017; Landers & Callan, 2014), with some research comparing connections between work and life domains (Karl & Peluchette, 2011). Yet, this work, too, has largely treated personal and professional domains as undifferentiated within each domain and has not examined the characteristics of the relational partner. In sum, both the boundary management and the OSN literatures have yet to systematically examine how a focal employee evaluates characteristics of the relational partner when making boundary blurring decisions. Thus, we introduce a framework of relational boundary blurring at work and examine it in an online context.

A FRAMEWORK OF RELATIONAL BOUNDARY BLURRING

To develop our framework of relational boundary blurring, we build on social cognition and person perception research, which examines how people evaluate others along two core dimensions—warmth and competence—when forming relationships. Warmth judgments typically precede competence judgments because survival depends primarily on others' benevolent intent (Fiske, Cuddy, & Glick, 2007; Judd et al., 2005; Rosenberg et al., 1968). Warmth judgments are also more relevant in

interpersonal relationships (Wojciszke et al., 2009); people are more willing to be friends with, trust, and help those they judge as warmer and less instrumental (Casciaro, Gino, & Kouchaki, 2014; Casciaro & Lobo, 2008; Chua, Ingram, & Morris, 2008). Last, warmth is often negatively related to competence (Judd et al., 2005). Thus, we argue that the ability to judge the warmth and benevolence of one's colleagues is crucial given the risks of blurring the boundary at work, which are even more pronounced online. In sum, warmth evaluations of colleagues are a key unexamined mechanism shaping boundary blurring decisions.

People evaluate others' warmth based on important individual and group characteristics—namely, disclosure of personal information and status characteristics (Fiske et al., 2002; Fiske et al., 2007; Judd et al., 2005; Rosenberg et al., 1968; Taylor & Oberlander, 1969; Wojciszke et al., 2009). We define "disclosure" as the sharing of personal information (Altman & Taylor, 1973; Gibson, 2018) and "status" as the ranking of groups in a social structure according to position, prestige, or worth (Berger, Cohen, & Zelditch, 1972; Ridgeway & Walker, 1995). Two key aspects of status that convey warmth are female (vs. male) gender (Cuddy et al., 2004; Eagly & Karau, 2002; Eagly & Wood, 2012; Rudman & Glick, 2001) and symmetric (i.e., peer) versus asymmetric (i.e., boss/subordinate) rank (Fiske, 1992; Fiske, 2010; Wojciszke et al., 2009).

While these literatures identify key relational characteristics that people evaluate—disclosure, gender, and rank—they do not examine implications of these evaluations for boundary blurring decisions. For example, in a work context, colleagues' disclosure of personal life could be seen as either humanizing or stigmatizing, which could alter employees' willingness to take the risk of boundary blurring with them. On OSNs, a key instantiation of relational boundary blurring is connecting with colleagues as friends online. Connection can result from either sending or accepting a request. While distinct, both actions blur the boundary because they allow colleagues access to one's personal life online. Thus, we focus on how evaluations of colleagues shape overall decisions to connect as friends online. Given this is a novel context, we include illustrative quotes (below) to enrich and contextualize our theorizing about connecting as friends with colleagues on OSNs.¹

Evaluation of Colleagues' Disclosure of Personal Information

People evaluate others' disclosure of personal information when forming relationships (Altman & Taylor, 1973; Collins & Miller, 1994; Nifadkar, Wu, & Gu, 2019; Taylor & Oberlander, 1969). Following research highlighting the importance of the amount and content (e.g., intimacy and appropriateness) of others' disclosure (Bazarova & Choi, 2014; Lin & Utz, 2017), we focus on evaluations of the amount of appropriate self-disclosure, rather than the content itself, in both off- and online settings (Chelune, Skiffington, & Williams, 1981; Kim & Dindia, 2011; Lin & Utz, 2017; Sprecher, Treger, & Wondra, 2013). People often disclose similar amounts of personal information in both settings (Kim & Dindia, 2011). Moreover, in online settings, personal information is often publicly available (Farahbakhsh, Han, Cuevas, & Crespi, 2013; Gross & Acquisti, 2005) and people form impressions based on publicly accessible information on online profiles (Evans, Gosling, & Carroll, 2008; Gosling, Gaddis, & Vazire, 2007). As such, people can evaluate others' disclosure of personal information in both off- and online settings prior to the decision to connect as friends online.

We propose that employees will evaluate colleagues who disclose more personal information (whether off- or online) as warmer because disclosure is humanizing. People perceive those who disclose more in person as responsive, intimate, and close (Laurenceau, Barrett, & Pietromonaco, 1998) and those who disclose more online as intimate (Park, Jin, & Jin, 2011), close (Lin & Utz, 2017), and likable (Limperos, Tamul, Woolley, Spinda, & Sundar, 2014). Perceiving disclosing colleagues as warmer helps mitigate the career risks of sharing one's personal life in a more visible, explicit,

¹ We use qualitative data to illustrate the relationships that we theorize about based on the literature (Bartel, Wrzesniewski, & Wiesenfeld, 2012; Miles & Huberman,

^{1994).} We presented a series of open-ended questions to a sample of 292 participants on MTurk. The sample was 64% female, average age was 37.40 (SD=11.33), with 14.11 years of full-time work experience (SD=10.65). All participants had a Facebook account (average of 336 friends). We asked participants to recall receiving Facebook requests from colleagues based on disclosure, gender, and rank, and various combinations of these categories. Each participant described reactions to receiving requests from two to four types of colleagues. We asked how it felt to receive the request, why the participant thought the colleague was sending a request, and how the participant responded to the request. We collected approximately 20–25 responses about each type of colleague.

permanent, and less tailored way, increasing the likelihood that employees will connect with them as friends online. Consistent with our theorizing, one participant described connecting with a disclosing colleague as follows: "I accepted. I like to connect with coworkers, especially coworkers who are open and warm like myself" (#20, female, 34 years old, event coordinator). By contrast, another didn't see value in connecting with a less disclosing colleague: "I felt 'meh.' I didn't really see the point in adding me if they weren't going to be *social* on social media" (#60, male, 20 years old, truck driver). We expect that employees perceive colleagues who disclose more personal information—whether off- or online—as warmer, and are more willing to blur the boundary with them online. Figure 1 shows the hypothesized main and mediation effects.

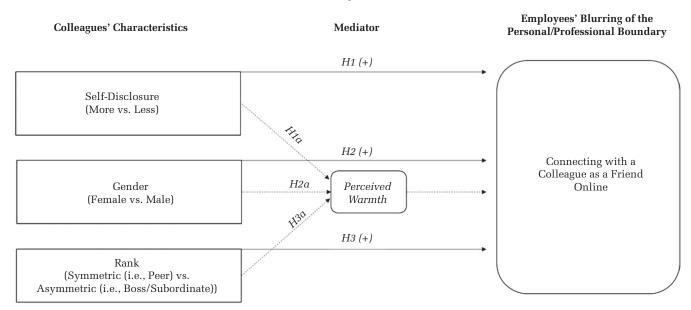
Hypothesis 1. Employees are more likely to connect as a friend online with colleagues who disclose more (vs. less) personal information.

Hypothesis 1a. The positive relationship between a colleague's self-disclosure and likelihood of connecting as a friend with this colleague online is mediated by perceived warmth.

Evaluation of Colleagues' Gender

Gender is a key status characteristic that people evaluate when making relationship decisions (Fiske et al., 2007; Ridgeway, 2011). People evaluate women as warmer and men as more instrumental because of societal role expectations that associate women with caregiving and nurturance roles and men with agentic and dominant roles (Eagly & Karau, 2002; Fiske et al., 2002; Rudman & Glick, 2001). Consequently, employees are likely to view female colleagues as more open to being friends, receiving personal information, and being trustworthy with this information than male colleagues, when deciding to blur the relational boundary. Moreover, the visible, explicit, permanent, and less tailored features of OSNs are likely to amplify the perceived career risks associated with blurring the boundary with male versus female colleagues. For instance, employees may fear giving male colleagues access to their personal life online because they are perceived to be more professional, cold, or instrumental. Consistent with this logic, both male and female participants were more reluctant to connect with male colleagues, viewing them as less warm and benevolent. Describing a male colleague, one

FIGURE 1
Main and Mediation Effects of Colleagues' Self-Disclosure, Gender, and Rank on Connecting as Friends with Colleagues Online



Notes: This model represents the main effects and mediation hypotheses. Main effects are represented by solid lines; the mediation effects are represented by dotted lines. For the three-way interaction predictions, see Table 1.

male participant stated: "I felt uncomfortable and uneasy. I was hesitant to accept it. He wanted to keep up with my life" (#29, male, 24 years old, marketing). Likewise, a female participant stated: "Honestly, I thought it was creepy, even though I think he was just trying to be friendly. I just wasn't comfortable with him seeing photos of me out with my friends and not in my work attire" (#33, female, 33 years old, wholesale buyer). Thus, we posit:

Hypothesis 2. Employees are more likely to connect as a friend online with female (vs. male) colleagues.

Hypothesis 2a. The positive relationship between female colleagues and likelihood of connecting as a friend with colleagues online is mediated by perceived warmth.

Evaluation of Colleagues' Rank

People also evaluate others' rank in the formal hierarchy (Steckler & Rosenthal, 1985), based on symmetric (i.e., peer) or asymmetric status (i.e., subordinate or boss) (Fiske, 1992; Wojciszke et al., 2009), when forming relationships. Research on status distance argues that people engage in informal relationships with those of symmetric rank (Blau, 1977; Lincoln & Miller, 1979; McPherson & Smith-Lovin, 1987; Phillips et al., 2009) and experience discomfort with those of asymmetric rank (Kram & Isabella, 1985; Pillemer & Rothbard, 2018; Thompson, 1961). Preliminary work speculates that rank is salient to people in online relationships as well, though this has yet to be fully investigated (Boyd, 2004; Peluchette et al., 2013). People evaluate those of symmetric rank as warm and less instrumental because they view them as less capable of inflicting harm (Fiske et al., 2002; Judd et al., 2005), individuating them (Allport, 1954) and viewing them as "friend" material (Mann, 2007). By contrast, people evaluate both those of higher and lower ranks as less warm and benevolent for different reasons, responding with envy toward higher- and scorn toward lower-ranking individuals (Fiske, 2010). Thus, employees may blur the boundary less with bosses or subordinates compared to peers because the lack of warmth suggests bosses or subordinates may be capable of misusing information about one's personal life. These concerns are even greater on OSNs because bosses and subordinates can gain more permanent access to information about employees' personal life that employees may not have intended for them to see. Indeed, participants described reluctance to connect with both bosses and subordinates

due to concerns about their benevolence: "I felt like [my boss] was trying to seem hip and relatable but I was also worried he was spying on me" (#31, male, 38 years old, marketing) and "I think the subordinate was sending me the request because he wanted to kiss up to me. ... I have not responded" (#43, female, 26 years old, retail). Thus:

Hypothesis 3. Employees are more likely to connect as a friend online with colleagues of symmetric rank (i.e., peers) than with those of asymmetric rank (i.e., subordinates or bosses).

Hypothesis 3a. The positive relationship between symmetric rank and likelihood of connecting as a friend with colleagues online is mediated by perceived warmth.

Evaluating Colleagues' Self-Disclosure and Gender

When evaluating self-disclosure and gender jointly, we expect that self-disclosure—whether in person or online—will moderate the effect of gender on connecting as friends online, for female but not male colleagues. Women who disclose more confirm gender role prescriptions and are seen as warmer, whereas those who disclose less violate these prescriptions and are seen as colder (Eagly & Karau, 2002; Fiske et al., 2002; Rudman & Phelan, 2008). Thus, female colleagues who disclose more will seem safer to blur the boundary with, whereas those who disclose less will seem riskier to blur the boundary with. OSNs may amplify these perceived risks due to the more permanent, visible, and less tailored window it provides into one's personal life. Consistent with this theorizing, one participant described connecting with a disclosing female colleague as follows: "I was happy ... she works in my group so we are closer than other workers ... I accepted and she had full access to my profile" (#240, male, 29 years old, medical technology). We expect that self-disclosure will be less consequential for decisions to blur the boundary online with male colleagues because there are competing influences. On the one hand, disclosure may affect men more than women because women are already more likely to be perceived as warm. On the other hand, men are expected to be "strong" and "silent" (Chelune, 1976: 1002), and disclosure by male colleagues could be perceived as a gender role violation (Derlega & Chaikin, 1976). Thus:

Hypothesis 4. Self-disclosure interacts with gender such that employees are more likely to connect as friends online with female colleagues who disclose more rather than less personal information, while disclosure will be less consequential for connecting as friends online with male colleagues.

Evaluating Colleagues' Self-Disclosure and Rank

When evaluating self-disclosure and rank jointly, we expect that self-disclosure—whether in person or online—will moderate the effects of asymmetric though not symmetric rank on connecting as friends with colleagues online. Self-disclosure provides individuating information (Allport, 1954), infusing warmth into asymmetric relationships (Fiske, 2010). Employees will perceive disclosing bosses with less envy, seeing them as more human, approachable, and warm, and perceive disclosing subordinates with greater empathy and less scorn, seeing them as worthy of connecting with as a "friend" online. Self-disclosure, whether in person or online, will mitigate the greater career risks associated with connecting with those of asymmetric rank, especially on OSNs, where blurring the boundary is more permanent, visible, and less tailored. Consistent with this logic, one participant stated: "[My subordinate and I] have become friends while working together and share interest in gardening, basketmaking, and a few other hobbies ... I did accept the request because we are becoming friends and I like seeing pictures of her children" (#282, female, 49 years old, farm manager). The effect of disclosure by peers is less consequential because they are already perceived as warm (Fiske et al., 2002; Judd et al., 2005).

Hypothesis 5. Self-disclosure interacts with asymmetric rank such that employees are more likely to connect as friends online with bosses and subordinates who disclose more versus less personal information and equally likely to connect as friends online with peers regardless of disclosure.

Evaluating Colleagues' Gender and Rank

When evaluating gender and rank jointly, we expect that employees are least likely to connect as friends online with male colleagues of asymmetric rank because the negative effects of male gender and asymmetric rank on connection amplify one another. Indeed, expectations of men and those of asymmetric rank as less warm and benevolent reinforce one another (Schein, 1991). Connecting as friends on OSNs with male bosses and subordinates can increase employees' concerns about providing a broader and more permanent window into one's

personal life. Consistent with this logic, one participant described reluctance to connect with a male boss as follows: "I felt odd. Why did he want to see what I do when I'm not at work? It's not any of his business, anyway" (#176, female, 22 years old, constituent engagement). Employees are also less likely to connect with female bosses or subordinates compared to both male and female peers. Female bosses are evaluated less warmly than male or female peers because their hierarchical status violates gender role stereotypes (Eagly & Karau, 2002; Johnson, Murphy, Zewdie, & Reichard, 2008). Female subordinates may also be evaluated less warmly than male or female peers because both female gender and subordinate rank can amplify perceptions that lowerstatus others are not worthy of affiliation (Fiske, 2010). Employees may thus have greater concerns with connecting on OSNs with female colleagues of asymmetric rank and be less willing to grant female bosses and subordinates more visible, permanent, and less tailored access to their personal life. Indeed, one participant described reluctance to connect with a female boss: "She is very cold and business-like" (S4 #1072, male, 35 years old, educator). By contrast, employees will blur the boundary similarly with male and female peers because symmetric rank conveys warmth (Fiske et al., 2002; Judd et al., 2005).

Hypothesis 6. Gender and asymmetric rank interact such that employees are least likely to connect as friends online with male colleagues of asymmetric rank compared to all other conditions, and are less likely to connect as friends online with female colleagues of asymmetric rank compared to male and female colleagues of symmetric rank (i.e., peers).

Evaluating Colleagues' Self-Disclosure, Gender, and Rank

Building on the logic underlying our two-way interaction hypotheses that disclosure will be more consequential for female rather than male colleagues, and those of asymmetric rank than peers, we expect that disclosure will be most consequential for female bosses or subordinates. Specifically, employees will be more willing to connect with female colleagues of asymmetric rank when they disclose more rather than less compared to all other colleagues of asymmetric rank. More disclosure, whether in person or online, ameliorates the negative gender role stereotypes of female bosses or subordinates, increasing the likelihood of connection; by contrast, less disclosure amplifies these stereotypes, decreasing the likelihood of connection.

Indeed, one participant described connecting with a disclosing female boss as follows: "I thought it was quite odd at first ... but it was nice to see her on a personal level and not just business" (#202, female, 30 years old, personal caregiver). By contrast, another described connecting with a less disclosing female boss: "[I] felt a little uneasy, as I do not accept friend requests from acquaintances whom I don't know well" (#197, male, 30 years old, graphic design). However, as theorized earlier, because disclosure is less consequential for male colleagues (Chelune, 1976; Derlega & Chaikin, 1976), we do not expect it to moderate the effect of asymmetric rank for men as much as it does for women. That is, more disclosure does not alter the negative effects of male bosses or subordinates on likelihood of connection. Thus, employees will be least likely to connect with male colleagues of asymmetric rank regardless of disclosure.

Further, building on the logic underlying our two-way interaction hypotheses that disclosure and gender are both less consequential for peers than those of asymmetric rank, we expect that disclosure will affect male and female peers similarly. More disclosure is likely to amplify the positive effect of both male and female peers on likelihood of connection because both symmetric rank and disclosure convey warmth and benevolent intent, attenuating the career risks associated with blurring the boundary. Thus, employees will be willing to connect on OSNs and provide a less tailored and longer-lasting window into their personal life with both male and female peers who disclose. Consistent with this, one participant described a disclosing female peer: "[I accepted to further our friendship and to compare our lives. We chat all day so may as well keep in touch more" (#192, female, 28 years old, customer service). Another described connecting with a disclosing male peer: "absolutely ... we are friends at work ... and [I am] very fond of both him and his wife" (#227, female, 64 years old, finance). Last, employees are more likely to connect with disclosing female peers compared to disclosing female colleagues of asymmetric rank because of the positive effects of congruent gender role stereotypes for female peers who disclose. Table 1 shows our expectations for the three-way interaction for all comparisons.

TABLE 1
Summary of Predictions for Three-Way Interaction: Moderating Effect of Self-Disclosure on the Interaction between
Gender and Rank

Colleagues'	Colleagues' C	Gender: Male*	Colleagues' G	ender: Female
Amount of Self- Disclosure	Colleagues' Rank: Asymmetric*	Colleagues' Rank: Symmetric	Colleagues' Rank: Asymmetric*	Colleagues' Rank: Symmetric
More disclosure	More disclosure does not alter negative effects of male bosses/subordinates on likelihood of connection	More disclosure amplifies the positive effect of both male and female peers on likelihood of connection	More disclosure ameliorates the negative effect of female bosses/ subordinates on likelihood of connection	More disclosure amplifies the positive effect of both male and female peers on likelihood of connection
Less disclosure*	Less disclosure does not alter negative effects of male bosses/subordinates on likelihood of connection	Less disclosure attenuates the positive effect of both male and female peers on likelihood of connection	Less disclosure amplifies the negative effect of female bosses/ subordinates on likelihood of connection	Less disclosure attenuates the positive effect of both male and female peers on likelihood of connection

Notes: Words in *italics* without * represent levels of each factor associated with warmth and hence a greater likelihood of connecting as friends with colleagues online and blurring the personal/professional boundary. Words in *italics* with * represent levels of each factor associated with lack of warmth and hence a lower likelihood of connecting as friends with colleagues online and blurring the personal/professional boundary. Summaries of the moderating effects of disclosure for the interaction of rank and gender are presented in the cells. Larger figures in each cell represent a greater likelihood of connection.

Hypothesis 7. Disclosure, rank, and gender interact such that employees are more likely to connect as friends online with female colleagues of asymmetric rank who disclose more compared to those who disclose less and compared to male colleagues of asymmetric rank regardless of disclosure; employees will also be less likely to connect to female colleagues of asymmetric rank who disclose more compared to female colleagues of symmetric rank who disclose more; but, employees are more likely to connect as friends online with both male and female colleagues of symmetric rank who disclose more compared to those who disclose less.

METHOD

We examine our relational boundary-blurring framework using a multi-study approach. Prior to testing our hypotheses, in Studies 1 and 2, we examine two basic theoretical assumptions: (a) connecting with colleagues online is an important phenomenon and (b) it is a novel instantiation of boundary blurring. Study 1 uses publicly available data from a nationally representative sample to understand the extent to which people connect as friends with colleagues online. Study 2 uses a panel of employees across several of the largest industries in the United States to understand whether people experience connecting as friends with colleagues online as boundary blurring. In Studies 3 and 4, we experimentally test our hypotheses by manipulating selfdisclosure, gender, and rank to examine how these factors shape online boundary blurring. These studies focus on boundary blurring on Facebook because it is a widely used OSN (Hofstra, Corten, Van Tubergen, & Ellison, 2017) where people share personal information. Together, these studies triangulate on the phenomenon of how people blur the relational boundary in modern organizational life.

STUDY 1

Sample

We used a nationally representative sample to examine connecting as friends with colleagues online. This sample provides a more robust and precise estimate of the prevalence of this phenomenon than prior work that drew on convenience samples that were less representative of the workforce in terms of age and gender (e.g., Frampton & Child, 2013; Huang & Liu, 2017). We used an archival data set of 2,003 American adults surveyed by the Pew Research Center (2014) about their internet use. We

restricted the sample to working adults aged between 18 and 70 (n = 899). Our final sample consisted of the 586 respondents who reported using Facebook (65%). The sample was 47% female with an average age of 42, which closely matches the age and gender composition of the U.S. workforce (BLS, 2019). The average number of Facebook friends was 347, with a median of 175.

Measures

We measured online "friendship" connection with the following items: Thinking about who is in your Facebook network, are you Facebook friends with... (1) work colleagues, (2) your parents, (3) children, (4) your other family members, and (5) friends from the past, such as high school or college?, with "yes" coded as 1 and "no" as 0. We recoded items (2), (3), and (4) into a single variable for family relationships (1 = yes to any, 0 = none). We also examined other online behaviors, including number of friends ("Thinking about your use of Facebook, approximately how many Facebook friends do you have in total?"); frequency of posting ("How often, if ever, do you share, post, or comment on Facebook as opposed to reading or viewing content?"; rated on a scale in which 1 = "never," 2 = "hardly ever," 3 = "sometimes," and 4 = "frequently"); and frequency of use for both Facebook and LinkedIn ("Thinking about the social media sites you use, about how often do you visit or use ... (1) Facebook and, (2) LinkedIn"; rated on a scale from 1 = "less often," 2 = "every few weeks," 3 = "a few days a week," 4 = "about once a day," and 5 = "several times a day"). We also examined key demographic variables: gender (1 = female, 0 = male), age, and employment status (1 = full time, 0 = part time).

RESULTS AND DISCUSSION

Table 2 presents the means, standard deviations, and correlations. The frequency of posting on Facebook was between "hardly ever" and "sometimes" (M=2.77). The average frequency of Facebook use was about "once a day" (M=3.96), compared to average frequency of LinkedIn use at about "every few weeks" (M=2.39). Of those using Facebook, 66% were connected to colleagues; 96% were connected to family and 89% were connected with friends from the past. Correlations between online behaviors and demographics showed older employees had fewer Facebook friends (r=-.43, p<.01) and used Facebook less (r=-.18, p<.01); women posted on

TABLE 2
Study 1: Means, Standard Deviations, and Correlations of Online Connection Behaviors and Demographics

									U	1	
Variable	M	SD	1	2	3	4	5	6	7	8	9
Online behaviors											
1. Facebook connection with colleagues ^a	0.66	0.47	_								
2. Facebook connection with	0.96	0.19	$.08^{\dagger}$	_							
family members ^a											
3. Facebook connection with	0.89	0.31	.20**	$.07^{\dagger}$	_						
past friends ^a											
4. Number of friends	346.92	591.84	.28**	.23**	.36**	_					
5. Frequency of posting on Facebook	2.77	0.86	.21**	.15**	.20**	.31**	_				
6. Frequency of Facebook use	3.96	1.17	.18**	.12**	.19**	.31**	.44**	_			
7. Frequency of LinkedIn use	2.39	1.19	.04	04	.13*	.17**	.08	.19**	_		
Demographics											
8. Gender ^b	0.47	0.50	.05	.08*	02	.02	.11*	.06	17**	_	
9. Age	41.77	14.42	06	08*	19**	43**	05	18**	01	.04	_
10. Employment status ^c	0.77	0.42	.11*	03	.03	08^{\dagger}	.06	10*	.09	13**	.21**

Notes: n = 586. This sample consists of only respondents who were employed (either full time or part time) and who reported using Facebook. The median for Number of friends is 175. This table presents Spearman correlation coefficients between key demographic characteristics and online behaviors because many of the variables are ranked.

Facebook more $(r=.11,\ p<.05)$ and used LinkedIn less $(r=-.17,\ p<.01)$; full-time employees used Facebook less $(r=-.10,\ p<.05)$ but were more connected with colleagues on Facebook $(r=.11,\ p<.05)$. In sum, Study 1 established that connecting with colleagues online is prevalent—two-thirds of working adults on Facebook are connected as friends with colleagues online. However, we could not assess whether they experienced this connection as boundary blurring, nor could we observe whether connection was due to sending or to accepting requests.

STUDY 2

Given the novel OSN context, Study 2 empirically investigates the assumption that connecting as friends with colleagues online is experienced as

boundary blurring and examines how it relates to traditional forms of offline boundary blurring. Further, it examines how online connection relates to sending and accepting requests.

Sample and Procedure

We recruited 676 full-time U.S. employees through the Lucid platform, sampled from three of the largest U.S. industries by employee size: retail or wholesale, health care or social assistance, and leisure or hospitality. All respondents had both subordinates and bosses. We excluded 146 participants who failed one of two attention checks. We used reCAPTCHA v3 for bot detection (rated from 1 = with absolute certainty not a bot to 0 = very likely a bot) and excluded 17 participants who scored below 0.9. The final sample included 513 participants: 61% were women, average age was 42, and average full-time work experience was 20 years.

Measures

To examine whether employees viewed connecting with colleagues online as boundary blurring, we measured OSN use, boundary blurring (using established and new scales), and demographics.

 $^{^{}a}$ Coded as 1 = yes, 0 = no.

 $^{^{}b}$ Coded as 1 = female, 0 = male.

 $^{^{}c}$ Coded as 1 = full time, 0 = part time.

 $^{^{\}dagger}p < .10$

^{*}p < .05

^{**}p < .01

 $^{^2}$ We also examined correlations between online behaviors and race, occupation, education, and income. Most of these were not significant; however, education was negatively correlated with frequency of use $(r=-.10,\,p<.05)$ and posting $(r=-.08,\,p<.05)$. White respondents were more likely $(r=.12,\,p<.01)$, while Asian/Pacific Islander $(r=-.10,\,p<.05)$ and Native/Mixed/Other respondents $(r=-.15,\,p<.01)$ were less likely, to be connected with colleagues online. The correlation between African American and number of friends was positive $(r=.09,\,p<.05)$.

Use of OSNs. We asked participants if they used Facebook or LinkedIn (1 = yes, 0 = no). We also asked how often they used each platform (ranked from 1 = "never" to 7 = "many times a day"). We included these two questions with respect to use and frequency of use of LinkedIn as well, to provide a comparison to Facebook use. LinkedIn is another common OSN, but is largely used in the professional domain alone, rather than in both personal and professional domains.

Facebook connection behaviors. Using the same question as was used in relation to the Pew data in Study 1, we asked participants who were on Facebook: "Thinking about who is in your Facebook network, are you Facebook friends with ... " and listed "parents, children, or other family members," "work colleagues," and "friends from the past, such as high school or college" (1 = ves, 0 = no). We also asked participants about other connection behaviors, including number of colleagues connected with on Facebook (rated from 1 = "no work colleagues" to 5 = "most work colleagues"), extent to which they sent requests to colleagues (from 1 = "none of my colleagues" to 5 = "all of my colleagues"), and the extent to which they accepted, and rejected, requests from colleagues (1 = "none of the requests" to 5 = "all of the requests").

Boundary blurring. To assess if connecting with colleagues on OSNs was perceived as boundary blurring, we used three established scales:³ (1) Dumas et al.'s (2013) three-item integration behaviors scale ($\alpha = .70$), asking participants how often they engaged in integration behaviors, such as "talk about nonwork life to coworkers" (rated on a scale of 1 = "never" to 5 = "very often"); (2) Desrochers, Hilton, and Larwood's (2005) three-item work–family integration scale ($\alpha = .69$), asking participants to rate their agreement with items such as "I tend to integrate my work and home duties when I work at home" (1 = "strongly disagree" to 5 = "strongly agree"); and (3) Edwards and Rothbard's (1999) four-item segmentation preferences scale ($\alpha = .89$), asking

participants to rate how much separation they personally prefer, with items such as "not having to think about work once I leave the workplace" (1 = ``do not prefer'') to 5 = ``very much prefer'').

Online boundary blurring. We assessed online boundary blurring with two new multi-item scales. First, we adapted the above-cited Desrochers et al. (2005) integration scale for OSNs, with the following three items: "Online social media has made it more difficult to tell where my work life ends and my personal life begins," "I tend to integrate my personal and professional life in online social media," and "I maintain a clear boundary between my personal and professional life in online social media" (reverse scored). As with the established Desrochers et al. (2005) scale, the reliability of this adapted measure was low ($\alpha = .63$), which may attenuate the strength of the observed correlations.

Second, we created a four-item Facebook blurring scale. Participants responded (from 1 = "strongly disagree" to 5 = "strongly agree") to the following: "Adding coworkers onto Facebook allows me to... (1) mix my personal and professional life, (2) blend work and personal domains, (3) blur the boundary between my personal and professional life, or (4) bring my personal and professional life together" ($\alpha = .88$).

Online and offline boundary blurring activities. To examine the boundary blurring nature of both online and offline activities, we asked participants to respond to the question "Do the following activities blur personal and professional life?" (rated on a scale of 1 = "strongly disagree" to 5 = "strongly agree"). We included six offline activities used in prior research on boundary management (see Dumas et al., 2013) and added four online activities, including items such as connecting with colleagues on Facebook and LinkedIn.

Results

We first examined the pattern of OSN use and connection behaviors. We then examined, using established and new scales, if people perceived connecting with colleagues on Facebook as boundary blurring. Table 3 shows the means, standard deviations, and correlations.

OSN use. More participants (87%) used Facebook compared to LinkedIn (53%; McNemar's test, $\chi^2 = 143.55$, p < .01). Average frequency of Facebook use (M = 5.78; between "once" and "more than once daily") was significantly greater than average frequency of LinkedIn use (M = 3.58; between "once" and "more than once weekly"), t(249) = 20.01, p < .01.

³ We searched for validated scales in the organizational behavior and OSN literatures to capture whether connecting was viewed as boundary blurring. Scales in the OSN literature have addressed Facebook intensity (Ellison et al., 2007), self-disclosure on Facebook (Park et al., 2011), privacy risks and concerns (Lankton, McKnight, & Tripp, 2017), and negative consequences of social media at work (Landers & Callan, 2014). Because these do not measure boundary blurring, we use established and adapted boundary blurring scales.

Study 2: Means, Standard Deviations, and Correlations of Online Facebook Connection Behaviors with Colleagues and Established and New Boundary Management Scales TABLE 3

Variable	M	SD	1	2	3	4	5	9	7	8	6	10	11
Facebook connection behaviors													
1. Connected to colleagues	0.79	0.41	I										
2. Connected to family members	0.93	0.25	.35**	I									
3. Connected to friends from the past	0.94	0.25	.25**	.43**	I								
4. Number of colleagues connected with	2.87	1.13	.58**	.16**	.11*	I							
5. Extent of sending requests	1.93	0.91	.37**	80.	.05	.51**	I						
6. Extent of accepting requests	3.08	1.29	.54**	.15**	60'	.62**	.46**	I					
7. Extent of rejecting requests	2.32	1.21	48**	15**	11*	38**	17**	54**	I				
Established boundary management scales													
8. Integration behaviors	2.81	0.84	.18**	$^{*}01$.	.05	.34**	.42**	.32**	13**	I			
(Dumas et al., 2013)													
9. Work–family integration	2.34	0.89	.14**	04	.03	.24**	.24**	.15**	09	.35**	I		
(Desrochers et al., 2005)													
10. Preference for segmentation	4.00	96.0	08	.04	.01	10*	12*	05	90.	11*	27**	I	
(Edwards & Rothbard, 1999)													
New boundary management scales													
11. Desrochers et al.'s (2005) scale,	2.30	0.83	.22**	00	90'	.30**	.40**	.24**	11*	.35**	.58**	18**	I
modified for social media													
12. Facebook blurring scale	3.37	06.0	.23**	07	.04	.39**	.40**	.37**	19**	.40**	.19**	05	.24**

Notes: n = 513. Sample demographics: female = 61%; age (M = 41.81, SD = 10.97); years of full-time work experience (M = 20.36, SD = 11.09). Correlations between Facebook connection behavior measures are with the subset of people who reported using Facebook (n = 448).

 $^{^*}p < .05 \ ^{**}p < .01$

Facebook connection behaviors. Of those on Facebook, 79% were connected as friends with colleagues, while 93% were connected with family members and 94% were connected with past friends. Participants were connected to between "a few" and "some" of their work colleagues (M = 2.87). Participants sent requests to approximately "a few" colleagues (M=1.93), and accepted approximately "half" of the requests they received from work colleagues (M = 3.08), and rejected between "a few" and "half" of the requests (M = 2.32). The binary measure of being connected with work colleagues on Facebook is positively correlated with the number of work colleagues one is connected to (r = .58,p < .01), sending (r = .37, p < .01) and accepting requests (r = .54, p < .01). It is negatively correlated with rejecting requests (r = -.48, p < .01).

Boundary blurring. To examine whether employees perceived connecting with colleagues on Facebook as boundary blurring, we examined the correlations between the five Facebook connection behaviors above and the five scales of boundary blurring. Table 3 shows that the binary measure of connecting with colleagues on Facebook used in Study 1 was positively correlated with the two established measures of integration behavior ($r_{\text{Dumas et al. (2013)}} =$.18, p < .01; $r_{\text{Desrochers et al. (2005)}} = .14$, p < .01) and the two new scales for online integration ($r_{\text{New online}}$ Description et al. (2005) = .22, p < .01; $r_{\text{New Facebook}}$ $_{\rm blurring}$ = .23, p < .01). In addition, number of work colleagues and sending and accepting requests were all also significantly positively correlated with these same four boundary blurring scales. Number of colleagues and sending requests were also significantly negatively correlated with preferences for segmentation (Edwards & Rothbard, 1999). Rejecting

requests was significantly negatively correlated with three of the four integration behavior scales, but not preference for segmentation.

Online and offline boundary blurring activities. To explore if people view connecting with colleagues on Facebook as boundary blurring, we compared employees' ratings of 10 online and offline activities. As shown in Table 4, connecting with colleagues on Facebook (M = 3.51) was similar to offline boundaryblurring activities such as attending employeeinitiated social events (M = 3.51) and talking about personal life at work (M = 3.53). It was significantly more blurring than other integrating activities such as talking about work after work hours (M = 3.12)and attending company-sponsored social events (M = 3.07). These five activities were all perceived to be more boundary blurring than the four interactive work activities and connecting with colleagues on LinkedIn (M = 2.73). To show that boundary blurring activities were related to one another in theoretically predictable ways, and were distinct from a set of interactive professional activities, we also conducted an exploratory factor analysis using principal axis factoring with an oblimin rotation, yielding two factors with eigenvalues greater than 1: blurring and nonblurring activities (r = .44). Table 5 shows that connecting with colleagues on Facebook loads with three offline blurring behaviors. Five nonblurring behaviors, including connecting on LinkedIn, load on the second factor. One item did not load highly on either factor.

Discussion

Study 2 provided a better understanding of whether connecting as friends with colleagues online

TABLE 4
Study 2: Means and Standard Deviations for "Whether the Following Activities Blur Personal and Professional Life"

Activity	M	SD
Connecting with colleagues on Facebook	3.51 ^a	1.05
Connecting with colleagues on LinkedIn	$2.73^{ m b}$	1.17
Going to employee-initiated social events (e.g., drinks after work, lunch, golf)*	3.51 ^a	1.10
Talking about your personal life during work hours*	$3.53^{\rm a}$	1.08
Talking about work after work hours*	3.12^{c}	1.16
Going to company-sponsored social activities (e.g., holiday parties, company picnics, sporting events)*	$3.07^{\rm c}$	1.17
Attending work group or team meetings*	$2.46^{ m d}$	1.22
Attending professional development seminars*	$2.38^{\rm e}$	1.21
Posting to the company intranet (e.g., Slack, etc.)	$2.61^{ m b}$	1.15
Work-related online discussion forum	$2.52^{ m d}$	1.22

Note: n = 513. Means that do not share a superscripted letter label differ by paired t-test at p < .05.

^{*}Denotes items from Dumas et al. (2013).

TABLE 5
Study 2: Factor Analysis of "Whether the Following Activities Blur Personal and Professional Life"

	F	actors
Activity	Boundary Blurring Activities	Interactive Professional Activities
Connecting with colleagues on Facebook	.61	.01
Talking about your personal life during work hours*	.54	03
Going to company-sponsored social activities (e.g., holiday parties, company picnics, sporting events)*	.62	.24
Going to employee-initiated social events (e.g., drinks after work, lunch, golf)*	.78	08
Connecting with colleagues on LinkedIn	.14	.56
Posting to the company intranet (e.g., Slack, etc.)	11	.71
Attending professional development seminars	.11	.73
Work-related online discussion forum	05	.80
Attending work group or team meetings	01	.83
Talking about work after work hours*	.36	.35

Notes: n = 513. Extraction method: Principal Axis Factoring. Rotation: Oblimin.

is perceived as boundary blurring. First, we replicated initial evidence from Study 1 that connecting with colleagues online is prevalent across many industries and organizations. Second, we showed that the binary measure used in Study 1 relates to the number of colleagues and sending, accepting, and rejecting requests, in expected ways. Third, this study provided some initial evidence that employees perceive connecting with colleagues on Facebook as boundary blurring. The correlations suggest that employees who are connected with colleagues on Facebook engage in more integration overall (as assessed by established integration scales) and perceive connecting online as more integrating (as assessed by online integration scales). Last, connecting with colleagues on Facebook is seen as similar to other boundary blurring activities and seen as more blurring than a number of face-to-face and online activities.

Study 2 had several limitations. We measured connection behaviors with single items; however, they were specific and face-valid measures designed to replicate and extend the measures in Study 1. We also adapted and used new online integration behavior scales. The reliability of both the established and adapted Desrochers et al. (2005) scales was low, below the recommended .70 (Nunnally, 1978); however, the new online boundary blurring scale we developed had a high reliability. Last, while this study provided some evidence that people experience connecting with colleagues online as boundary blurring, it was not designed to test our hypotheses. Hence, we conducted two experimental studies to do so.

STUDY 3

Sample and Procedure

Study 3 is a controlled experiment that allows for deductive theory testing of our hypotheses by manipulating colleagues' disclosure, gender, and rank and assessing participants' subsequent decision to accept a friend request. We recruited 659 U.S. working adults with at least two years of work experience from MTurk.⁴ We excluded 45 people who provided bot-like responses (i.e., nonsensical answers) or had IP addresses that were exact duplicates or outside the United States (Dennis, Goodson, & Pearson, 2018). Our final sample consisted of 614 working adults: 49% were female, with an average age of 32, and 12 years of work experience. They were on Facebook for an average of seven years, with an average of 265 friends (median = 171).

We used a $2 \times 2 \times 3$ between-subjects design, manipulating disclosure (less, more), gender (male, female), and rank (boss, peer, subordinate). We gave

^{*}Denotes items from Dumas et al. (2013).

⁴ We replicated Study 3 using a student sample in the lab; results were consistent (see Online Appendix A). All supplemental materials (Online Appendices A–G) are available via the Open Science Framework platform at https://osf.io/qahxw/?view_only=dd2b5ee74d5241f0bbaa e62c550c9a50.

⁵ In our theorizing about asymmetric rank, we did not hypothesize about different effects for bosses versus subordinates. Empirically, however, in both Studies 3 and 4, we examined boss and subordinate conditions separately because there may be subtle differences between them.

participants a mock but realistic Facebook profile of a fictitious colleague and subsequently asked how likely they were to accept the friend request. Past work has shown that people can access a fair amount of personal information about an individual on OSNs prior to connecting because users often publicly reveal personal details on their Facebook profile page (Farahbakhsh et al., 2013; Gross & Acquisti, 2005).

Manipulations. We manipulated online selfdisclosure based on prior work that "extends the traditional definition of self-disclosure (verbally revealing self) to include pictures of self and favorite links posted on the web" (Kim & Dindia, 2011: 156). In the more disclosure condition, we referred to photos and videos, and included likes and interests regarding appropriate, generic, mainstream content—for example, musicians, movies, and television shows that had won major awards. In the less disclosure condition, we did not include any of this personal information. We manipulated gender by showing the name and corresponding photo of either a female ("Emily Jacobs") or male ("Greg Jacobs") colleague. We selected the photos from a collection that had been rated on physical attractiveness in a pretest both were rated similarly as "above average" in attractiveness. We manipulated rank by asking participants to imagine that the colleague on the Facebook profile was their boss, peer, or subordinate (see Online Appendix B).

Dependent variable. After viewing the profile, participants were asked how likely they would be to accept a friend request from this colleague (on a scale from 1 = "very unlikely" to 7 = "very likely").

Mediator. Colleagues' warmth was rated using three items (Fiske et al., 2002): "This person is [friendly/well-intentioned/sincere]" ($\alpha = .84$; 1 = "strongly disagree" to 7 = "strongly agree").

Manipulation checks. We used six items (rated on a scale from 1 = "strongly disagree" to 7 = "strongly agree"). The disclosure items were "I feel like this is someone who discloses a lot of personal information in his/her profile" and "From the profile, I feel like I know a lot about this person." The rank items were "This person has power over me" and "I have power over this person." The gender items were "This person looks feminine" and "This person looks masculine."

Results

Manipulation checks. The manipulation checks were all significant in the predicted direction.

Participants in the more disclosure condition reported the colleague disclosed more personal information ($M_{\text{more}} = 2.95$, $SD = 1.24 > M_{\text{less}} = 2.33$, SD =1.34), t(612) = 5.88, p < .01, and that they knew more about the colleague ($M_{\text{more}} = 3.47$, SD = 1.38 > $M_{\text{less}} = 2.34$, SD = 1.28), t(612) = 10.53, p < .01. The female colleague was rated as significantly more feminine $(M_{\text{fem}} = 5.72, SD = .95)$ and less masculine $(M_{\rm masc}=2.03,\,SD=1.12)$, compared to the male colleague $(M_{\text{fem}} = 2.77, SD = 1.24), t(612) = 32.97,$ p < .01, and $(M_{\text{masc}} = 4.94, SD = 1.14)$, t(612) =-31.84, p < .01. Those who received a request from a boss reported that the person had greater power over them $(M_{\text{boss}} = 4.54, SD = 1.79)$ than those in the peer $(M_{\text{peer}} = 1.96, SD = 1.15), t(399) = 17.18, p <$.01, and subordinate conditions ($M_{\text{sub}} = 2.03$, SD =1.24), t(412) = 16.64, p < 01. Conversely, those who received a request from a subordinate reported having greater power over them ($M_{\text{sub}} = 4.55$, SD = 1.72) than those in the peer $(M_{\text{peer}} = 2.45, SD = 1.29)$, t(411) = 14.03, p < .01, and boss conditions ($M_{boss} =$ 2.48, SD = 1.17, t(412) = 14.26, p < .01.

Main effects. Table 6 presents results of an analysis of variance. Supporting Hypothesis 1 and Hypothesis 3, Model 1 shows significant main effects for disclosure, F(1, 609) = 9.27, p < .01, and rank, F(2, 609) = 14.60, p < .01. Participants were more likely to accept a request from a colleague who discloses more versus less $(M_{\text{more}} = 4.95, SD =$ $1.80 > M_{less} = 4.53$, SD = 1.81), t(612) = 2.88, p < 1.80.01, Cohen's d = .23. They were more likely to accept a request from a peer ($M_{\text{peer}} = 5.27$, SD = 1.57) than a subordinate ($M_{\text{sub}} = 4.57$, SD = 1.81), t(411) =4.14, p < .01, Cohen's d = .41, or boss ($M_{\text{boss}} = 4.37$, SD = 1.94), t(399) = 5.09, p < .01, Cohen's d = .51. Hypothesis 2 was not supported; there was no main effect for gender, F(1, 609) = 1.58, p = .21 (see also the figure presented in Online Appendix C).

Mediation by warmth. To test Hypothesis 1a, Hypothesis 2a, and Hypothesis 3a that disclosure, gender, and rank, respectively, would have indirect effects on the likelihood of accepting a request via warmth, we used Model 4 of the PROCESS macro (Hayes, 2012) and bootstrapping (5,000 samples) to calculate bias-corrected confidence intervals. Supporting Hypothesis 1a, we found significant positive indirect effects for more disclosure (.17, 95% CI [0.08, 0.28]). While the main effect for gender was not significant, we did find an indirect effect of gender (.07, 95% CI [0.01, 0.14]), partially supporting Hypothesis 2a. Hypothesis 3a was not supported as the confidence intervals for the indirect effects of asymmetric rank included zero.

TABLE 6
Study 3: The Effects of Colleagues' Self-Disclosure, Gender, and Rank on Likelihood of Accepting a Colleague's Online
Friend Request

		1			
Predictors	Model 1 <i>F</i>	Model 2 F	Model 3 F	Model 4 F	Model 5 F
Self-disclosure (H1)	9.27**	9.26**	9.27**	3.34 [†]	2.89 [†]
Gender (H2)	1.58	1.52	1.62	0.83	0.97
Rank (H3)	14.60**	14.39**	14.57**	14.94**	15.80**
Self-disclosure \times Gender (H4)		0.78	0.95	1.30	1.58
Self-disclosure \times Rank (H5)		0.10	0.09	0.00	0.01
Gender × Rank (H6)		1.02	0.92	0.77	0.80
Self-disclosure \times Gender \times Rank (H7)			4.39*	4.26*	3.97*
Perceived warmth				18.01**	16.47**
Controls					
Age					1.60
Participant gender					0.01
Years of work experience					0.02
Years on Facebook					6.69*
Number of Facebook friends					3.25^{+}
R^2	.06	.07	.08	.11	.13
$\mathrm{Model}\; F$	$F(4, 609) = 9.87^{**}$	$F(9, 604) = 4.71^{**}$	F(11, 602) = 4.70**	F(12, 601) = 5.93**	F(17, 596) = 5.06*

Notes: n = 614. Control variables, including warmth, have been standardized. For the robustness check (Model 5), control variables included age (M = 32.16, SD = 10.68); participant gender (1 = female, 0 = male; 49.3% were female); years of work experience (M = 12.42, SD = 9.41); years on Facebook (M = 7.00, SD = 2.18); and number of Facebook friends (M = 265.47, SD = 425.63).

Two-way interactions. Table 6, Model 2, shows there were no significant interactions for disclosure and gender (Hypothesis 4), F(1, 604) = .78, p = .38, disclosure and rank (Hypothesis 5), F(2, 602) = .10, p = .91, or gender and rank (Hypothesis 6), F(2, 604) = 1.02, p = .36.

Three-way interaction. Supporting Hypothesis 7, Table 6, Model 3, shows the overall three-way interaction was significant, F(2, 602) = 4.39, p < .05. Figure 2 shows means by condition and planned contrasts. More disclosure ameliorated the negative effect of asymmetric rank for female but not male bosses. Female bosses who disclose $(M_{\rm fem imes boss imes more} = 4.88)$ are more likely to be accepted, compared to those who disclose less $(M_{\rm fem imes boss imes less} = 4.00;$ Cohen's d = .45). Male bosses did not differ by disclosure ($M_{\text{male} \times \text{boss} \times \text{more}} = 4.33$ vs. $M_{\text{male} \times \text{boss} \times \text{less}} = 4.25$; Cohen's d = .04). Moreover, disclosing female bosses are less likely to be accepted than female peers who disclose more $(M_{\rm fem \times peer \times more} = 5.66; \text{ Cohen's } d = .45) \text{ but these}$ female bosses are similarly likely to be accepted compared to female peers who disclose less $(M_{\rm fem imes peer imes less} = 4.85;$ Cohen's d = .02). While we expected the three-way interaction to be similar for bosses and subordinates, we found that, in the subordinate conditions, disclosure does not

alter the likelihood of acceptance for women $(M_{\text{fem} \times \text{sub} \times \text{more}} = 4.81 \text{ vs. } M_{\text{fem} \times \text{sub} \times \text{less}} = 4.79;$ Cohen's d = .01) but it does for men $(M_{\text{male} \times \text{sub} \times \text{more}} = 4.83 \text{ vs. } M_{\text{male} \times \text{sub} \times \text{less}} = 3.91;$ Cohen's d = .52).

Last, we expected that more disclosure would amplify the positive effects of symmetric rank on likelihood of connection for both male and female colleagues similarly. However, disclosure affected likelihood of acceptance for female more than male peers: female peers who disclose more ($M_{\text{femxpeerxmore}} = 5.66$) were significantly more likely to be accepted as friends online than those who disclose less ($M_{\text{femxpeerxless}} = 4.85$; Cohen's d = .49), but disclosure did not make a difference for male peers ($M_{\text{male} \times \text{peer} \times \text{more}} = 5.23$ vs. $M_{\text{male} \times \text{peer} \times \text{less}} = 5.35$; Cohen's d = .08).

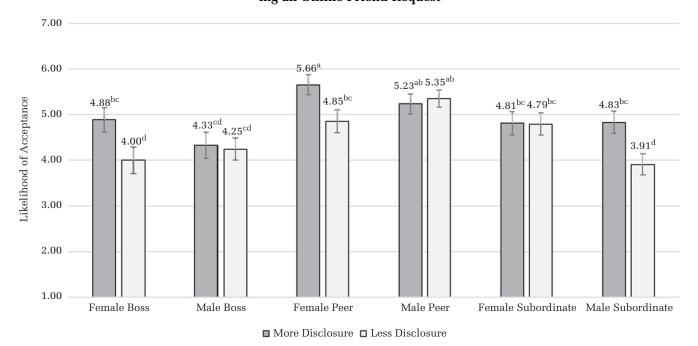
Robustness checks. Although our experimental approach helps rule out alternative explanations, we also included a robustness check to control for participant characteristics. We controlled for participant gender, because men and women may navigate their work and nonwork roles differently (Andrews & Bailyn, 1993; Rothbard & Brett, 2000). We also controlled for the respondents' age, years of work experience, years of using Facebook, and number of Facebook friends, as these may be related to employee's online behaviors (Boyd & Ellison, 2007; Ellison,

 $^{^{\}dagger}p < .10$

^{*}p < .05

^{**}p < .01

FIGURE 2 Study 3: Three-Way Interaction of Colleagues' Self-Disclosure, Gender, and Rank on Likelihood of Accepting an Online Friend Request



Notes: n = 614. Means that do not share a superscripted letter label differ by planned comparisons at p < .05. Bars indicate standard error.

Steinfield, & Lampe, 2007). As shown in Table 6, Model 5, the results did not change with the inclusion of these controls. We also analyzed the data with and without the reported exclusions; results did not change. Although not hypothesized, we also examined moderated mediation for the two- and three-way interactions (see Online Appendix D for these additional analyses).

Discussion

Study 3 showed that employees are more willing to accept requests from colleagues who disclose more and who are peers. Moreover, despite the fact that there is no main effect of colleagues' gender, there is an indirect effect of gender via warmth (Rucker, Preacher, Tormala, & Petty, 2011; Zhao, Lynch, & Chen, 2010), indicating that gender may play a role in willingness to accept friend requests from colleagues online. Further, disclosure, gender, and rank interact such that disclosure ameliorates the negative effect of asymmetric rank on likelihood of acceptance for female but not male bosses. The experimental design of Study 3 provided control over the stimulus materials, enabling greater causal inference and internal validity. However, the external validity of the study could be stronger; while we strove for psychological realism, we asked participants to imagine connecting with fictitious colleagues. Relatedly, although our manipulation of disclosure was consistent with the literature (Kim & Dindia, 2011), and participants in the more disclosure condition had a significantly higher mean for sharing personal information than those in the less disclosure condition, the means of the first manipulation check item suggest that participants did not strongly agree that the profile showed a lot of personal information about the person. Second, we did not ask if participants were naive to the purpose of the study. Third, we used a shortened version of the Fiske et al. (2002) warmth scale and a single-item measure of accepting a request. Last, while we found support for a three-way interaction, a constructive replication would provide more confidence in our results. To address these concerns, we conducted a second experimental study.

STUDY 4

Sample and Procedure

Study 4 is a controlled experiment that draws on real workplace relationships to test our hypotheses and strengthen external validity. Specifically, Study 4 aims to constructively replicate Study 3 by examining the decision to connect online with real colleagues. Our sample consisted of 740 U.S. participants recruited via MTurk (TurkPrime); 61% were female; mean age was 39, with an average of 16 years of full-time and four years of part-time work experience. They were on Facebook an average of nine years with an average of 375 friends (median = 225).

We used an adapted critical incident technique with random assignment to experimental condition (e.g., Casciaro et al., 2014; Mayer, Greenbaum, Kuenzi, & Shteynberg, 2009; Wellman, Mayer, Ong, & DeRue, 2016). Studies using a traditional critical incident design ask participants to recall real experiences rather than rely on hypothetical events (Flanagan, 1954; Hershcovis, 2011; Morgeson, 2005). This approach has been used to capture work experiences (e.g., Falbe & Yukl, 1992; Mitchell, Vogel, & Folger, 2015). When combined with an experimental design, the adapted critical incident approach retains external validity, while adding the ability to draw causal inference. As in Study 3, we used a 2 \times 2 \times 3 between-subjects design, manipulating disclosure, gender, and rank of the participant's colleague.

Manipulations. Participants were randomly assigned to one of 12 conditions. We asked them to follow three steps to recall real work experiences with a colleague who matched their assigned condition. First, we asked participants to identify three colleagues based on their assigned gender and rank condition, to minimize bias in recalling only colleagues they were close to and ensure variance in colleagues' amount of disclosure. To manipulate gender and rank, we stated:

Please recall three former or current [male/female] [bosses/subordinates/peers], or [men/women] [who have had authority over you at work/you have had authority over at work/peers you have had at work].

Participants then wrote the initials of each person they had recalled. Second, to manipulate disclosure, we asked, "How much do each of the people you listed disclose about their personal lives?" and instructed participants to rank these colleagues based on a scale of 1 (person who discloses the most) to 3 (person who discloses the least). This approach is consistent with research showing that a key parameter of disclosure is the amount of personal information shared (Chelune et al., 1981).

Third, based on their randomly assigned condition, we then chose the colleague they ranked first

(more disclosure) or last (less disclosure) as the colleague the participant would answer subsequent questions about. To ensure they focused on the specific colleague who matched their assigned condition, we populated the subsequent questions with the colleague's initials (e.g., "AB"). We next asked participants to describe the colleague using three open-ended questions:

- (1) Please describe [AB]'s qualities and characteristics as an individual.
- (2) Please describe [AB] as a [boss/subordinate/peer] and your relationship with [him/her].
- (3) Please also describe the type of personal information that [AB] [shared/did not share] at work about [his/her] personal life (e.g., family, hobbies, feelings, events).⁶

Dependent variable. To measure connecting as friends with work colleagues online, we asked "Are you already connected with [AB] on Facebook?" (1 = yes, 0 = no).

Mediator. Colleague's warmth was measured with Fiske et al.'s (2002) full six-item scale: "This person is [warm/good-natured/sincere/trustworthy/friendly/well intentioned]" ($\alpha = .94$; 1 = "strongly disagree" to 5 = "strongly agree").

Manipulation checks. The disclosure items were "[AB] is someone who discloses a lot of personal information" and "I feel like I know a lot about [AB]." The rank items were "During the time we worked together, [AB] had power over me" and

⁶ For example, one participant described a female boss who disclosed less as follows: (1) "She is very cold and business-like. She does not disclose personal information nor engage in any behavior less than entirely professional"; (2) "She is somewhat aloof and cold, and thus is not well trusted"; (3) "She does not share information on opinions, family, or nonwork information." Another participant described a male peer who disclosed more: (1) "He's a very friendly, sweet, talkative kind of person. He is extremely smart and well educated and loves to talk about philosophy, literature, art, but also everything that is current and fun"; (2) "He is respectful, diplomatic, and productive. I really like working with him because he's a great team player and thinks really quickly—he's amazing at finding ingenious solutions"; (3) "His wife just had a baby and he's the happiest guy in the world right now. So he posts a lot of baby and wife photos on Facebook, all very cute and charming. And he's open about how it is living with a baby—lack of sleep, etc., but in a funny way." See Online Appendix E for more examples.

"During the time we worked together, I had power over [AB]." The gender items were "How feminine is [AB]?" and "How masculine is [AB]?" Responses were rated on a scale from 1 ("strongly disagree") to 5 ("strongly agree").

Exclusions. We initially recruited 1,288 participants, utilizing the duplicate IP address block feature to prevent use of bots. We excluded 60 participants because they either provided bot-like responses (5) (Dennis et al., 2018), completed the study in under five minutes (5) (Meade & Craig, 2012), did not pass screening questions (2), or failed an attention check (48). We removed two participants who only listed one colleague, because we could not randomly assign them to a disclosure condition. We further examined open-ended responses and removed participants describing a person who did not match their assigned gender or rank condition (n = 31). Using a naivety check, we examined if participants had guessed the purpose of the study, asking: "What did you think this study was about?" We removed the one person who indicated the study was about disclosure, rank, and gender—resulting in 1,194 participants. Last, 454 participants reported recalling former rather than current colleagues. As recalling former colleagues could be subject to greater recall errors, we removed them. Our final sample consisted of 740 participants.

Results

Manipulation checks. Manipulation checks were all significant in the predicted direction. Participants in the *more disclosure* condition reported the colleague disclosed more personal information $(M_{\text{more}} = 3.95, SD = 1.06 > M_{\text{less}} = 1.93, SD = 1.06),$ t(738) = 25.83, p < .01, and that they knew more about the colleague ($M_{\rm more} = 4.12$, $SD = .92 > M_{\rm less} =$ 2.75, SD = 1.22, t(738) = 17.17, p < .01. Female colleagues were significantly more feminine ($M_{\text{fem}} =$ 4.02, SD = .92) and less masculine ($M_{\text{masc}} = 1.40$, SD = .63), compared to males ($M_{\text{fem}} = 1.36$, SD = .61; t(738) = 46.33, p < .01; $M_{\text{masc}} = 3.72$, SD = .92; t(738) = -40.20, p < .01). Those recalling bosses reported that the colleague had more power over them $(M_{\text{boss}} = 4.26, SD = .97)$ than those recalling peers $(M_{\text{peer}} = 2.00, SD = 1.26), t(492) = 21.78,$ p < .01, and subordinates ($M_{\text{sub}} = 1.68$, SD = 1.09), t(457) = 26.61, p < .01. Those recalling subordinates reported having more power over the colleague

 $(M_{\rm sub}=4.09,\ SD=.94)$ than those recalling peers $(M_{\rm peer}=2.02,\ SD=1.17),\ t(525)=22.21,\ p<.01,$ and bosses $(M_{\rm boss}=1.58,\ SD=.97),\ t(457)=28.20,\ p<.01.$

Analyses. We tested our hypotheses using logistic regression because the dependent variable was dichotomous. Fifty percent of participants were connected to colleagues. To examine pairwise comparisons, we used dummy variables for each condition and the Stata margins command, given that there are challenges with interpreting interaction effect coefficients with categorical variables in a logistic regression (Ai & Norton, 2003; Greene, 2000). For interpretation of effect size, we report odds ratios from the above logistic regressions.

Main effects. Table 7, Model 1, shows the main effects (see also the figure presented in Online Appendix F). Supporting Hypothesis 1 (Wald_{disc} = 53.18, p < .01), employees had almost three times the odds (OR = 2.96, p < .01) of being connected with colleagues who disclosed more personal information (63%) than less (37%). Supporting Hypothesis 2 (Wald_{gen} = 12.76, p < .01), employees had almost two times the odds (OR = 1.69, p < .01) of being connected with female (57%) than male colleagues (44%). Last, partially supporting Hypothesis 3 (Wald_{peer} = 23.76, p < .01), employees were significantly less likely to be connected to bosses (37%) than peers (59%), such that the odds of connecting to bosses was 59% lower than that of connecting to peers (OR = .41, p < .01), but there was no significant difference between peers and subordinates (OR = 1.38, p = .07). They were also less likely to be connected to bosses than subordinates (51%), the odds were 44% lower (OR = .56, p < .01), (Wald_{sub} = 10.65, p < .01).

Mediation by warmth. To test Hypotheses 1a, 2a, and 3a, we used Model 4 of the PROCESS macro using bootstrapping (5,000 samples), which accounts for the categorical dependent variable (Hayes, 2012). Supporting Hypothesis 1a, we found a significant indirect effect of disclosure (.19, 95% CI [0.10, 0.30]). In partial support of Hypothesis 3a, we found a significant indirect effect of asymmetric rank for bosses (-.15, 95% CI [-0.29, -0.04]), but not subordinates (.06, 95% CI [-0.03, 0.17]). We did not find support for Hypothesis 2a; the confidence interval for the indirect effect of gender included zero.

Two-way interaction effects. Table 7, Model 2, shows there were no significant interactions for disclosure and gender (Hypothesis 4) (Wald = 1.10, p = .29), disclosure and rank (Hypothesis 5)

⁷ Two participants listed two colleagues and ranked them on disclosure, so we included them in the analyses.

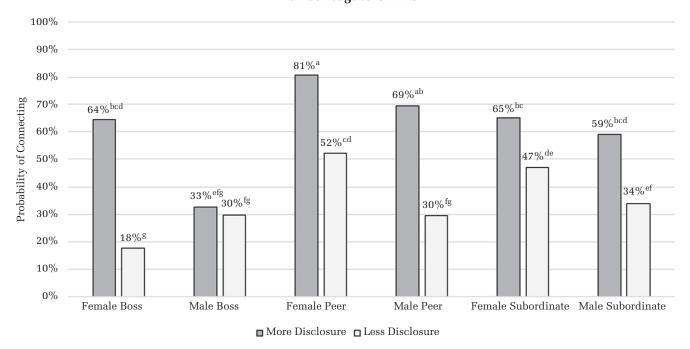
Study 4: The Effects of Colleagues' Self-Disclosure, Gender, and Rank on Connecting as Friends with Colleagues Online TABLE 7

											I			I	
		Model 1	_		Model 2	2		Model 3	_		Model 4	4		Model 5	
Predictors	В	SE	Wald	В	SE	Wald	В	SE	Wald	В	SE	Wald	В	SE	Wald
Less disclosure (H1)	-1.15	0.16	53.18**	-1.22	0.34	12.80**	-2.12	0.48	19.54**	-2.05	0.49	17.53**	-1.98	0.52	14.51**
Male (H2)	-0.56	0.16	12.76**	-0.63	0.32	3.82^{+}	-1.31	0.40	10.67**	-1.40	0.41	11.57**	-1.51	0.44	11.80**
Rank (H3)			24.11**			15.58**			5.53^{+}			5.14^{\dagger}			3.19
Peer (H3)	96.0	0.20	23.76**	1.39	0.36	15.39**	0.85	0.41	4.36*	0.77	0.42	3.42^{+}	0.72	0.44	2.63
Subordinate (H3)	99.0	0.20	10.65**	0.52	0.34	2.41	0.03	0.39	0.01	-0.09	0.40	0.02	0.08	0.42	0.03
Less disclosure \times Male (H4)				0.33	0.32	1.10	1.98	0.63	9.94**	2.19	0.65	11.51**	2.29	69.0	10.91**
Disclosure \times Rank (H5)						3.12			5.21^{+}			4.93^{+}			4.36
Less disclosure \times Peer (H5)				-0.47	0.40	1.36	0.76	0.61	1.56	0.81	0.63	1.69	0.92	99.0	1.96
Less disclosure \times Subordinate (H5)				0.18	0.40	0.20	1.38	09.0	5.17*	1.37	0.62	4.92*	1.36	0.65	4.34*
Gender \times Rank (H6)						1.47			3.74			3.97			5.33^{+}
Male \times Peer (H6)				-0.36	0.40	0.81	0.67	0.56	1.42	0.72	0.57	1.59	0.99	09.0	2.70
Male \times Subordinate (H6)				0.07	0.40	0.03	1.05	0.55	3.69^{\dagger}	1.11	0.56	3.90*	1.35	09.0	5.09*
Disclosure \times Gender \times Rank (H7)									9.62**			10.64**			12.31**
Less disclosure \times Male \times Peer (H7)							-2.30	0.83	7.73**	-2.46	0.85	8.48**	-2.83	06.0	8.96
Less disclosure \times Male \times							-2.25	0.82	7.52**	-2.44	0.84	8.42**	-2.81	06.0	9.79**
Subordinate (H7)															
Perceived warmth										0.55	0.10	29.37**	0.41	0.11	14.84**
Controls															
Age													0.01	0.17	0.01
Participant gender													-0.06	0.18	0.10
Years of work experience													-0.15	0.16	0.83
Years on Facebook													-0.04	0.09	0.24
Number of Facebook friends													0.26	0.11	5.32*
Length of relationship													0.61	0.10	37.20**
Part-time													-0.01	0.28	0.00
Closeness													0.64	0.19	11.35**
Constant	0.26	0.18	2.10	0.26	0.25	1.07	0.59	0.28	4.44*	0.55	0.29	3.68^{+}	0.36	0.34	1.16
Pseudo R^2	60.			60.			.10			.14			.20		
χ^2	91.22**	(df = 4)		$96.34^{**} (df = 9)$	(df = 6)	=	$106.27^{**} (df = 11)$	(df = 1)	1)	139.14** $(df=12)$	(df=1)	[2]	201.73** (df = 20)	(df=2)	0)

Notes: n = 740. Reference categories are More disclosure, Boss, and Female. We used McFadden's formula to calculate pseudo R². Continuous control variables, including warmth, have been standardized. Robustness check (Model 5) control variables included age (M = 38.62, SD = 10.58); participant gender (1 = female and noncisgender); 0 = male; $0 = \text{ma$ 11%; 0 = full-time); and closeness (1 = close, 36%; 0 = not close).

 $^{^{\}dagger}_{p} < .10 \\ ^{*}_{p} < .05 \\ ^{**}_{p} < .01$

FIGURE 3
Study 4: Three-Way Interaction of Colleagues' Self-Disclosure, Gender, and Rank on Connecting as Friends with Colleagues Online



Notes: n = 740. Probabilities that do not share a superscripted letter label differ by pairwise comparisons at p < .05.

(Wald = 3.12, p = .21), or gender and rank (Hypothesis 6) (Wald = 1.47, p = .48).

Three-way interaction effect. Hypothesis 7, Table 7, Model 3, shows that the threeway interaction was significant (Wald $_{male \times peer \times less}$ = 7.73, p < .01; Wald_{male×sub×less} = 7.52, p < .01). Figure 3 shows the percent of those connected by condition and the pairwise comparisons between conditions. More disclosure ameliorates the negative effect of asymmetric rank for female but not male bosses. Employees had eight times the odds (OR = 8.33, p < .01) of being connected with female bosses who disclosed more (64%) than those who disclosed less (18%). In addition, employees had about four times the odds of being connected to female bosses who disclosed more compared to male bosses who disclosed more (33%) (OR = 3.70, p < .01) and compared to male bosses who disclosed less (30%) (OR = 4.24, p < .01). There were no differences in connecting among these latter three conditions. Disclosing female bosses were less likely to be connected with than disclosing female peers (81%) (OR = .43, p < .05), but were similarly likely to be connected with female peers who disclose less (52%) (OR = 1.66, p = .17). We found a different pattern for subordinates: disclosure doubled the odds of connecting with female subordinates (more = 65% vs. less = 47%) (OR = 2.11, p < .05), and almost tripled the odds of connecting with male subordinates (more = 59% vs. less = 34%) (OR = 2.74, p < .01). Employees also had five times the odds of being connected with more versus less disclosing male peers (more = 69% vs. less = 30%) (OR = 5.30, p < .01) and almost four times the odds of being connected with more vs. less disclosing female peers (more = 81% vs. less = 52%) (OR = 3.88, p < .01).

Robustness checks. We ran several robustness checks. Despite random assignment to condition, to account for potential alternative explanations (Sigall & Mills, 1998; Singleton & Straits, 1999), we controlled for the same participant characteristics as in Study 3: gender, age, work experience, years on Facebook, and number of Facebook friends. In addition, we controlled for the length of time the respondent worked with the recalled colleague, as well as whether they worked part-time versus full-time as these may affect the relationship between them (Eberhardt & Shani, 1984; Harrison, Price, Gavin, & Florey, 2002; Riordan & Shore, 1997). Further, to address concerns with recalling colleagues one is closer to, we had two raters, blind to condition, code the open-ended descriptions for closeness (Cohen's

 κ = .88; 36% coded as close). The results do not change when including these controls (see Table 7, Model 5).

Connecting as friends with colleagues online does not specify whether the connection exists because the participant sent or accepted a request. However, we could disentangle this because we asked those who reported a connection (n = 371) whether they sent (34%; n = 128) or received (66%; n = 243) the request. We tested our hypotheses separately for senders versus receivers using a multinomial logit. As with the main results, disclosure, gender, and rank have main effects on both sending and receiving (Senders: Wald_{disc} = 17.70, p < .01; Wald_{gen} = 8.01, p < .01; Wald_{peer} = 6.20, p < .05; Wald_{sub} = 1.79, p = .18; and Receivers: Wald_{disc} = 52.24, p < .01; Wald_{gen} = 9.40, p < .01; Wald_{peer} = 25.58, p < .01; Wald_{sub} = 12.94, p < .01). Likewise, disclosure ameliorates the negative effect of asymmetric rank on sending a request to and accepting a request from female but not male bosses (Senders: $Wald_{male \times peer \times less} = 5.11$, p < .05; and Receivers: $Wald_{male \times peer \times less} = 4.72, p < .05$). (See Online Appendix G, Table AA.)

To understand the effect of excluding those who recalled former (rather than current) colleagues, we also analyzed the subsample of these respondents as well as a sample combining those who recalled former and current colleagues. All analyses were conducted both with and without participant-reported control variables. In all four analyses, the results for the main effects replicated in sign and significance. The three-way interaction was consistent with the primary findings with controls (Wald_{male×peer×less} = 3.89, p < .05) and marginal without controls (Wald_{male×peer×less} = 3.17, p = .08), in the combined sample of former and current colleagues. However, it was not significant in the subsample of former colleagues, with or without controls. Thus, recalling a former colleague may introduce greater error than recalling current colleagues, and should be accounted for with controls or exclusions. We also ran analyses excluding the 81 part-time employees; the main and three-way interaction effects were the same. Last, although not hypothesized, we also examined the moderated mediation for the two- and three-way interactions. (See Online Appendix G for these additional robustness analyses.)

Discussion

Study 4 constructively replicated and extended Study 3. The design differences between the two were intended to compensate for the limitations inherent in each. While Study 3 relied on connecting with colleagues using fictitious profiles, Study 4 relied on an adapted critical incident design to examine connecting with real work colleagues, providing external validity while maintaining internal validity. However, while increasing realism, this design introduces recall error and decreases experimental control over the stimulus. Moreover, the recall design did not allow us to conclude that disclosure definitively precedes the decision to connect as friends. Study 3's experimental design addressed some of these concerns because it established temporal precedence of disclosure, rank and gender, standardized the stimulus, and did not rely on recall. Another key design difference between the studies is our manipulation of disclosure. Study 3 used a minimal paradigm, standardizing the amount and type of online disclosure, whereas Study 4 used a broader manipulation of disclosure in which participants recalled colleagues' off- and online disclosure. Last, Study 4 assessed a behavioral outcome, online connection as friends with colleagues, rather than the attitudinal one, likelihood of acceptance, assessed in Study 3. Further, the Study 4 measure allowed us to distinguish between sending versus accepting requests.

Across both studies, we found largely consistent results. Participants were more likely to connect online with colleagues who disclosed more personal information, and were less likely to connect with bosses than with peers. Further, disclosure, gender, and rank interact such that disclosure ameliorates the negative effect of asymmetric rank on likelihood of connecting as friends online with female but not male bosses. Our robustness checks also suggest that colleagues' disclosure, gender, and rank shape both sending and accepting requests, similarly.

While there were a number of consistent findings, there were also some small differences in the results between the two studies, which may have been due to the design differences between them. First, unlike in Study 3, Study 4 showed a main effect of gender such that participants were more likely to connect with female rather than male colleagues, although the indirect effect via warmth was not supported. Second, while, in Study 3, participants were less likely to connect with both bosses and subordinates compared to peers, in Study 4, participants were equally likely to connect with subordinates and peers. Our Study 4 design, recalling real work colleagues, may have reinforced the salience of colleagues' gender and boss characteristics more than

the minimal prime we used in Study 3, such that the gender and boss expectations were stronger. For example, one Study 4 participant described her male boss as a "firm but polite man who is kind to others ... strict at work. He is a former Marine so he expected everybody to follow rules and never deviate from them. ... He used to sit with us in the break room and we'd all laugh together, but, when we went back to work, it was all discipline again" (#59, female, 32 years old, customer service). Further, the stronger effect in Study 4 for bosses versus peers and subordinates may occur because connecting with a real boss carries more consequences than with a fictitious boss. Third, while we had a consistent main effect of disclosure in both studies, the effect was stronger in Study 4, which may be due to the broader and richer manipulation of disclosure we used.

GENERAL DISCUSSION

We built and tested a framework of relational boundary blurring to examine whom employees blur the personal/professional boundary with on OSNs. We theorized and showed that disclosure and status (both gender and rank) are key characteristics of the relational partner that affect employees' decisions to blur the boundary online. Study 1 showed in a nationally representative sample that, while twothirds of people connect as friends with colleagues online, not everyone does so. Study 2 showed that employees view connecting with colleagues on OSNs such as Facebook as boundary blurring. Studies 3 and 4 demonstrated experimentally that employees are more likely to connect as friends with colleagues who disclose more personal information and less likely to do so with bosses than peers. Further, we found that disclosure moderates the effect of asymmetric rank for female but not male bosses, showing it is important to consider these factors together in shaping online boundary management decisions.

Theoretical Contributions

Our study makes several contributions. First, our relational boundary-blurring framework shifts the boundary management literature from examining characteristics of the focal employee to examining those of the relational partner (Ashforth et al., 2000; Dumas & Sanchez-Burks, 2015; Rothbard et al., 2005). We have shown how employees blur the boundary relationship by relationship at work. Moreover, we examined boundary blurring in the

extreme context of OSNs, where it is more visible, explicit, permanent, and less tailored (e.g., Leonardi & Vaast, 2017; McFarland & Ployhart, 2015). We found that employees are drawn to connecting with colleagues who disclose personal information both online and offline (Chelune, 1976; Chelune et al., 1981; Kim & Dindia, 2011). We also found that employees are consistently concerned about crossing the line with their boss online in part because they view them as lacking benevolence (e.g., "spying"). However, asymmetric rank matters less when the colleague is a subordinate.

Second, our work sets the stage for a deeper understanding of colleagues' status, especially gender and rank, in boundary management. While the main effect of gender varied across our studies, we consistently found that disclosure is more beneficial for female rather than male bosses. On the one hand, female bosses may be uniquely able to use disclosure in online and offline settings to break through the relational barriers posed by asymmetric rank. On the other hand, employees' decisions regarding whom to blur the boundary with may be biased by gender role stereotypes. Reinforcing these gender role stereotypes could place disclosing female bosses at greater risk; for instance, it could decrease their online privacy or increase backlash on task-related outcomes based on being viewed as a "friend." Our work also implies that employees may misjudge male and female bosses who don't disclose by relying on gender role stereotypes. Thus, our work suggests one way in which gender discrimination and network inequalities (Ibarra, 1992) may persist on OSNs.

Third, our focus on evaluations of colleagues' characteristics provides a new lens for research on online workplace relationships, which has also tended to examine the focal employee (Bartels et al., 2019; Ollier-Malaterre et al., 2013; Pillemer & Rothbard, 2018). Further, by examining this extreme context, we illustrated that connecting as friends with colleagues online is an important and novel instantiation of boundary blurring. Interestingly, while prior research has highlighted differences between online and offline relationships (Leonardi & Vaast, 2017; McFarland & Ployhart, 2015), we found some similarities. In Study 2, we showed that connecting as friends with colleagues online and socializing with colleagues after work are similarly boundary blurring. Studies 3 and 4 also showed that the effects of both online and offline disclosure are similar.

Last, our focus on boundary blurring contributes to social cognition by going beyond existing research that focuses primarily on how evaluations affect prejudice and bias (Fiske et al., 2002; Fiske et al., 2007). We found that disclosure, female gender, and symmetric rank—characteristics that warmth-are not equivalent in their effects on boundary blurring. While disclosure is consistently mediated by warmth, gender and rank are less consistently mediated, suggesting that there may be other aspects beyond benevolent intent that people evaluate in choosing to blur the online boundary (Pillemer & Rothbard, 2018). Future research should examine other mechanisms associated with the risks of online boundary blurring, such as whether people think it is "worthwhile" to connect with certain types of colleagues or concerns about surveillance, ingratiation, or pressure. In addition, the consistent effects of the three-way interaction show that disclosure, gender, and rank matter jointly in shaping employees' decisions to blur the personal/professional boundary with colleagues online.

Strengths and Limitations

To test our framework of relational boundary blurring, we used a multi-study design. Each study had its own strengths and limitations. Study 1 used a nationally representative sample, providing external validity and evidence that connecting as friends with colleagues online is a prevalent phenomenon; however, we could not examine whether it was experienced as boundary blurring. Study 2 provided some evidence that employees experience connecting with colleagues online as boundary blurring. Studies 1 and 2 were correlational and not intended to test our hypotheses. Studies 3 and 4 were experimental, allowing us to draw causal inference and test hypotheses. The design of each experiment was intended to offset the limitations of the other. Study 3 provided a high degree of control over the stimulus; but lacked realism. Study 4 tapped into real work relationships, but relied on recall, limiting our ability to establish temporal precedence of disclosure in decisions to connect. We tried to address these concerns within each study. In Study 3, we aligned our manipulation of disclosure with realworld social media profiles in which people disclose information publicly (Farahbakhsh et al., 2013; Gross & Acquisti, 2005). In Study 4, while we had a richer manipulation of online and offline disclosure and real-world behavioral outcomes (i.e., connection), we tried to address recall bias concerns by examining those who recalled current (vs. former) colleagues and by conducting additional robustness

checks. While we found largely consistent results across Studies 3 and 4, suggesting that disclosure shapes connection decisions, future work should further establish the temporal precedence of real-world disclosure, online and offline, for connection decisions.

Another limitation of both Studies 3 and 4 is that they used single items for the dependent variable. We used these because they were face-valid measures about specific behaviors (i.e., likelihood of accepting a Facebook request and connecting with a work colleague on Facebook). Further, in Study 2, we showed that these behaviors, while distinct, are related to one another and to measures of boundary blurring. Thus, while each of our studies has limitations, they complement one another: Studies 1 and 4 offer generalizability, Study 2 offers empirical support for conceptualizing connecting as friends with colleagues online as boundary blurring, and Studies 3 and 4 offer causal inference and constructive replication of our hypothesized effects.

Future Directions

Our findings suggest several further directions for future research. First, scholars should investigate the amount and type of disclosure both online and offline more extensively. For example, nascent and conceptual research on OSNs suggests that disclosing excessive amounts of information, even appropriate information, can undermine relationships at work (Landers & Callan, 2014; Miller & Mundey, 2015; Ollier-Malaterre & Luneau-de Serre, 2018; Pillemer & Rothbard, 2018). While it was not our focus, the Study 4 design allowed us to explore the idea that disclosing too much information could be harmful.8 We found an asymptotic relationship suggesting that disclosure helps connection up to moderate levels, but not beyond, and nor does it harm connection. While these findings suggest that too much disclosure is not harmful, future research should continue to explore potential negative effects of too much (e.g., people who post a lot) or too little disclosure. If employees attribute colleague's limited online disclosure to avoidance rather than lack of warmth, they may still blur the boundary with them.

 $^{^8}$ We conducted an exploratory analysis using the following item: "I feel that [AB] discloses a lot of personal information." While the correlation between disclosure and connection was positive (r=.32), the partial correlation (controlling for disclosure) between disclosure-squared and connection was negative (r=-.10, p<.01).

Further, building on research that suggests appropriateness and intimacy of disclosure matter (Bazarova & Choi, 2014; Lin & Utz, 2017), future research should also examine different types of disclosure content online, such as appropriate (e.g., cute animals) versus more politicized or stigmatized content (e.g., political views) and whom these disclosures benefit or harm. Indeed, excessive or inappropriate disclosure may not aid connection and may harm some types of colleagues more than others. While past work suggests that people disclose personal information publicly (Farahbakhsh et al., 2013; Gross & Acquisti, 2005), future work should also examine people's use of privacy settings, which can limit the extent and type of online disclosures that are visible to colleagues prior to connection (Ollier-Malaterre et al., 2013).

Second, future work should build on our findings that employees make boundary blurring decisions based on evaluations of colleagues' status characteristics. For example, while cross-gender effects were not central to our theorizing and we controlled for participant gender in our robustness tests, there may be relationships between the gender of the employee and the colleague. Future work may also want to examine other status characteristics, such as race, and its interaction with gender and rank, in boundary blurring decisions. Further, our findings about the interaction of gender, rank, and disclosure also raise important questions about the persistence of gender inequalities on OSNs and in the workplace more broadly. For example, future work should examine whether friendship connections are beneficial or harmful to female bosses who disclose, and the extent to which nondisclosing bosses may be benevolent and safe for employees to connect with as friends online. Scholars should also examine how employees can overcome using gender role stereotypes and what other information they can use to make these determinations rather than relying on status characteristics alone.

Third, future work should investigate consequences associated with online boundary blurring. For example, online boundary blurring with colleagues may change what employees disclose online, limiting what they share with their family and friends as well. Online connection decisions may also affect performance and offline relationships with colleagues (Landers & Callan, 2014). For example, decisions to maintain the boundary by rejecting or "unfriending" colleagues may negatively affect offline relationships. Decisions to blur the boundary may also raise dilemmas for employees regarding

how to attend to and use information about colleagues' personal lives. Future work should also examine subtle differences between OSN connection decisions such as sending, accepting, and rejecting colleagues. Last, future work should consider how other OSNs such as Twitter, Instagram, and WeChat present opportunities for studying relational boundary blurring online.

Practical Implications

Navigating online boundary blurring is a thorny issue for employees. On the one hand, letting a colleague into one's personal world online signals an acceptance of vulnerability that opens up paths to a richer multiplex relationship (Haythornthwaite, 2001), which may in turn facilitate collaboration and teamwork. On the other hand, sharing information about one's personal lifestyle and beliefs online with the wrong colleague may expose employees to career consequences, such as not being hired or promoted (Brown & Vaughn, 2011; Ollier-Malaterre & Rothbard, 2015) and being discriminated against (Acquisti & Fong, 2020; Miller & Mundey, 2015). Our findings suggest that attending to relational partners, and carefully choosing whom one blurs the boundary with online, is an important, new, digital social skill that employees must develop as they navigate these challenges (Ollier-Malaterre et al., 2019).

Further, when making online connection decisions, employees should be aware that they may be relying on stereotypes about colleagues' benevolence. Thus, they should think more deeply and systematically about the person as an individual and the potential risks and rewards of connecting. Moreover, when sending requests, employees should be aware that moderate amounts of noncontroversial online disclosure may be sufficient for connecting. Bosses should be aware that subordinates are often hesitant to connect with them. As such, they should carefully consider whether initiating a connection request will make a particular subordinate uncomfortable, and, if so, refrain from friending them. Regardless, once employees decide to connect with their colleagues, they should remember that colleagues may be able to view what they share on a more permanent basis, and so may want to customize the information they share with different audiences (Ollier-Malaterre et al., 2013; Ollier-Malaterre & Rothbard, 2015).

Beyond OSNs, the increased use of technological platforms that encourage boundary blurring as the default will make online relational boundary blurring skills even more relevant. For instance, the COVID-19 pandemic has exponentially increased the number of people using video-conferencing technology from home, which gives colleagues a "literal window" into one's home and family life and has also increased the potential for greater surveillance by one's colleagues (Kniffin et al., 2020). Colleagues may be evaluating one another based on these "virtual sight lines" (Kniffin et al., 2020) (e.g., parenting roles, religious artifacts, books on one's shelf), which can amplify biases. Thus, individuals must become more skilled at simultaneously protecting privacy while forging social connection with colleagues.

Last, individual action is not always sufficient to tackle the problems of blurring the boundaries in our online world. Thus, employees should also consider taking collective action; for example, to call out gender-biased evaluations of female doctors' personal life disclosures on Twitter (e.g., ratings of women doctors in swimwear as "unprofessional"), male and female medical doctors created a social media awareness campaign (#MedBikini) (Goldberg, 2020). While organizational-level action is also required, organizations must be careful in undertaking it. Rather than implementing one-size-fits-all policies that do not account for employees' preferences around sharing their personal lives with colleagues online, organizations must ensure that these preferences do not perpetuate gender discrimination in social connections at work, whether online or offline. This may require a broader suite of tools to ensure both social connection and unbiased work decisions. For instance, organizations could offer training for employees in respecting people's preferences for sharing personal information online or not, ensure policies that prevent personal information from being misused in work decisions, and engage in broader gender equality interventions. Together, individual and collective action will be increasingly important for creating safe online spaces in which employees can navigate the boundary between their personal and professional lives with others.

CONCLUSION

As the popularity of OSNs continues to grow, employees' professional and personal lives will continue to collide in cyberspace (Ollier-Malaterre et al., 2013). Our research sheds light on a pervasive and widespread phenomenon—the experience of connecting as friends with colleagues online—and

demonstrates that how employees navigate the personal/professional boundary depends on whom they are navigating it with.

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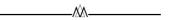
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